

**A METHOD AND SYSTEM FOR LED TEMPORAL DITHERING TO  
ACHIEVE MULTI-BIT COLOR RESOLUTION**

**ABSTRACT OF THE DISCLOSURE**

A method and system for temporal dithering of an LED indicator are disclosed, one embodiment of the method comprising: initializing the LED indicator to display a first color of a color palette; during each cycle of a preset cycling rate, cycling the LED indicator display color between the first color and one or more selected colors of the color palette, wherein the LED indicator is caused to display in turn the first color and each selected color of the color palette for a preset portion of each cycle determined to result in a perceived display color at the LED indicator; and repeating the cycling step to maintain the perceived display color at the LED indicator. The method can further comprise the step of changing the perceived display color to a new perceived display color. Changing the perceived display color can comprise: adjusting the size of the preset portion of each cycle allotted to each of the first color and the one or more selected colors for display, wherein the size of each preset portion is determined to result in the new perceived display color; and repeating the cycling step using the adjusted preset portion sizes to maintain the new perceived display color at the LED indicator. Further, changing the perceived display color can be manually initiated or automatically initiated in response to a changing condition. The changing condition can be, for example, an exceeded limit of a parameter associated with the LED indicator.